Demonstration Rain Garden Fact Sheet

The Hightstown Housing Authority Rain Garden

The Hightstown Environmental Commission

May, 2013

What is a Rain Garden?

A rain garden is a landscaped, shallow depression that allows precipitation to be collected and infiltrated naturally into the ground. This helps recharge groundwater supply and prevents a water quality problem called polluted runoff (nonpoint source pollution). Rain gardens are an important way to make cities and neighborhoods more attractive places to live while enhancing ecological health.

History

The Hightstown Housing Authority demonstration rain garden was installed in March, 2013. This rain garden was installed as part of a Sustainable Jersey/PSEG grant program that was complimented by the Housing Authority that is intended to be a demonstration site for the new Storm water Management Ordinance that was adopted by the Borough of Hightstown after hurricane Katrina.

Type of Runoff Managed

This approximately 400 square foot rain garden plus 100 lineal feet of EZFlow piping manages storm water from building 2 which contains 18 residential units and impervious coverage of 4968 square feet. During an average 1 inch rainfall event, approximately 2980 gallons of water will run off of this building. New Jersey has approximately 46.25 inches of rain per year, which is approximately 3.47 feet of rain per year (0.90*46.25 inches = 41.63 inches which = 3.47 feet of rain per year). Since the rain garden is approximately 400 square feet, plus an additional 200 square feet for the EZFlow, the amount of rain it collects in an average rainfall is approximately 60 cubic feet of water. This design allows for over 1.5 inches of rainfall before the possibility of overflow. Overall all, in an average year, this rain garden intercept, treats, and infiltrates approximately 124,090 gallons of rain, and prevents it from becoming runoff.

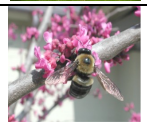
Installation

Approximately 6 workers were present for the installation of this rain garden in March, 2013. The native soils proved to be well drained and required no amendments during the rain garden installation. Donations for this rain garden were made by The Hightstown Housing Authority. The rain garden installation was also featured in the Windsor Heights Herald, The East Windsor Patch and the Borough and Housing Authority web site.

Plant Layout

The native plants that were installed in this rain garden were installed by our landscape contractor. Native hardy perennial species were selected since their well-established root systems survive well in both dry and wet conditions in New Jersey. Native plants do not require substantial fertilization, absorb water more efficiently than turf-style lawns, and are much easier to maintain than exotic species. The native plants selected for this rain garden were selected based upon differing heights, shapes, textures, and blooming schedule for aesthetic appeal.

The native plants used in this rain garden are provided in the table on the following page

Common Name	Scientific Name	Picture	Flowering Period	Flower Color	Height	Preferable Exposure to Sunlight	Preferable Soil Type	National Wetland Indicator
Witch Hazel	***Hamamelis***		Late fall into winter	Yellow	6-12 feet	Sun to dappled shade	Any	FAC
Indian Grass	***Sorghastrum nutans***		Late Spring	White	3feet	Sun	Any	UPL
Purple Cone Flower	*Echinacea atrorubens*		Late Spring /early summer	purple	24-36”	Full sun, will tolerate dappled shade.	Any	UPL
Ink Berry	***Ilex glabra***		Evergreen	White	18”-24”	Full sun	Sandy loam	FACU
Oak Leaf Hydrangea	*Hydrangea quercifolia*		Early Summer	White	Up to 12 feet	Shade, but will tolerate sun	Sandy, acidic	FACU
Iris	Iris sanguinea		Late spring	Purple	12-16 inches	Part sun	Sandy loam	FACW
Golden Rod	Solidago virgaurea		Late summer, fall	Yellow	18-24 inches	Sun to part sun	Any	FACW
Asters	*Diplopappus*		Summer	Purple	12-18 inches	Sun to part shade	Clay, heavy loam	FACW
Black Eyed Susan	***Rudbeckia hirta***		Late summer	Yellow	18-24 inches	Sun	Any	FACU
Magnolia	Magnolia wieseneri		Early Spring	Pink/white	10 feet	Sun	Any	FACW
Red Bud	***Cercis canadensis***		Early Spring	Pink	20 feet+	Shade	Damp/clay	FACW
Columbine	Aquilegia columbine magpie		Spring	White	18 inches	Shade	Sandy	FACU

Wild Bergamot	*Monarda fistulosa*		Summer to Fall	White/Pink	3 feet	Sun to dappled shade	Rich loam	UPL

National Wetland Indicator Key:

Obligate Wetland (OBL) – plants that nearly always (more than 99% of the time) occur in wetlands under natural conditions

Facultative Wetland (FACW) – plants that usually occur in wetlands (from 67 to 99% of the time), but are occasionally found in non-wetlands

Facultative (FAC) – plants that are equally likely to occur in wetlands and non-wetlands and are found in wetlands from 34 to 66% of the time

Facultative Upland (FACU) – plants that usually occur in non-wetlands (from 67 to 99% of the time), but are occasionally found in wetlands (from 1 to 33% of the time)

Upland (UPL) – plants that almost always (more than 99% of the time) occur in non-wetlands under natural conditions

Maintenance
This rain garden is being maintained by the Hightstown Housing Authority

Photographs

Before Installation	

During Installation	
After Installation